PATENT
Docket No. M 6678 HAMC

OFFICIAL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of
James K. Hawley

Serial No. 09/780,903
Filed: February 9, 2001
Title: LINER STRUCTURES

Examiner: K. Tran
Art Unit: 3634

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the Assistant Commissioner for Patents on the date shown below.

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Signature of certifier
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RESPONSE

Mail Stop Non-Fee Amendment
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Official Action of March 17, 2003, Applicants respectfully request that the rejection be reconsidered in light of the following discussion.

The drawings are objected to under 37 C.F.R. 1.83(a). The Examiner states:

"The drawings must show every feature of the invention specified in the claims. Therefore, "the upwardly extended ridges are straight and parallel to each other" in claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered."

Applicants respectfully submit that the upwardly extending ridges which are straight and parallel to each other are clearly shown in the drawings presently in the application. Applicants invite the Examiner's attention to Fig. 1 and Fig. 4 and the explanation of these figures with appears at page 11.

At page 11, Fig. 1 is described as a partial plan view of a liner of the invention. Liner 1 comprises a flexible non-skid plastic web 3 which can be formed from a

plasticized polymer if required. The liner shows ridges 2 comprised of a plastic which has a higher Shore A hardness than the web. The valleys between the ridges are shown at 4. As can be seen from Fig. 1, the ridges 2 and the valleys 4 are shown as being straight and parallel to each other. Fig. 4 shows the airflow in the valleys between the ridges in a straight parallel path. Applicants respectfully submit that the drawings clearly support the limitations in claim 7. Applicants respectfully request that the objection be reconsidered and withdrawn.

Claims 1, 2, 4 and 8-12 stand rejected under 35 U.S.C. 103(a) as unpatentable over Tan (US 5,204,159) in view of Bustos '288 (US 5,614,288). Applicants respectfully submit that Tan and Bustos '288 whether considered alone or in combination neither teach nor suggest the present invention.

Tan discloses a deformable, slip-free mat, comprising an anti-skid bottom surface having a plurality of spikes extending vertically from the flat or hemispherically recessed areas of the bottom surface and a top surface comprising a resilient material that is flat or a resilient material having embedded therein particles of abrasive materials held in a spaced apart relationship, wherein some of the abrasive materials extend out of and above an uppermost area of the top surface to provide good friction or slip-free characteristics. Applicants respectfully submit that Tan neither teaches nor suggests the structure of the present invention.

Firstly, the bottom surface of the Tan structure is anti-skid, however, the anti-skid property of the bottom surface is due to spikes extending from the bottom surface. The spikes are sufficiently hard that a person walking on the mat causes the spikes to penetrate into ice to provide the non-slip properties to the mat. Applicants respectfully submit that the soft flexible lower surface of the mat of the present invention cannot contain spikes which are sufficiently hard to penetrate ice. The lower surface of the structure of the present invention is soft and flexible and through its softness and flexibility provides a non-skid bottom surface to the mat structure of the invention.

The top surface of the Tan structure comprises a resilient material which can have embedded therein anti-slip abrasive particles which partially extend from the

upper surface of the mat (col. 2, lines 50-53). The top surface of the Tan mat does not contain ridges comprised of a plastic which is harder than the soft lower surface of the mat. If any ridges are present in the Tan structure, the ridges comprise abrasive particles such as a mixture of sand and vulcanizable rubber, diamond dust, boron carbide, boron nitride, tungsten carbide, aluminum ceramic and tackonite. (Col. 3, lines 1-6). Applicants respectfully submit that Tan teaches a mat having a hard lower surface and a resilient upper surface. The bottom material is sufficiently hard that spikes formed from the material can penetrate ice. Applicants respectfully submit that the structure of Tan would not be suitable as a shelf liner since the hard spikes would penetrate wood and mar the surface, or if the surface was a hard material such as a metal, the spikes would not penetrate the surface and therefore would not prevent slipping and sliding of the mat. Applicants respectfully submit that Tan is not pertinent to the invention.

The deficiencies in Tan are not cured by combination with Bustos '288. Bustos '288 discloses an extruded rigid plastic base plate and a plurality of co-extruded plastic beads which are of the same resin as the base plate, but are plasticized with from 0.5% to 10% by weight of silicone. Applicants respectfully submit that as one skilled in the art would understand that a plasticizer reduces the hardness of a plastic material. Therefore, the beads which are plasticized with silicone would have a hardness which is lower than the hardness of the base plate.

Bustos '288 discloses a rigid base material having deposited thereon beads of a softer plasticized resin which contains silicone to provide a lower coefficient of friction to the beads. The lower coefficient of friction is not provided by providing a harder resin than the base, but by providing an oil like surface which decreases the coefficient of friction. (Applicants invite the Examiner's attention to col. 2, lines 33-43 and 51-55.)

Applicants respectfully submit that the combination of Tan with Bustos '288 would not lead one skilled in the art to the structure of the present invention. Applicants submit that one combining the teachings of Tan with Bustos '288 would be lead to a structure having a hard base portion with a resilient top surface having a low coefficient

of friction due to the presence of silicone in the composition.

The teachings of Tan are not properly combinable with the teachings of Bustos '288 since Tan discloses a structure having a top surface with a high coefficient of friction which can be increased by introducing the abrasive particles protruding from the surface of the structure with the structure of Bustos '288 which is directed to a rigid structure having a top surface with reduced friction. Clearly, the objective of Tan is to provide a high friction top surface to prevent slipping by a person walking on the mat and Bustos '288 is directed to a top surface with a low coefficient of friction which provides for easy slipping of objects on the top surface. Applicants submit that the goals of the two references are so different that they are uncombinable and a rejection based thereon is untenable. The ridges of Bustos '288 would provide a low friction surface which would not be useful in the Tan structure. Applicants respectfully request that the rejection be reconsidered and withdrawn.

Claim 3 stands rejected under 35 U.S.C. 103(a) as unpatentable over Tan in view of Bustos '288 and further in view of Doshi (US 6,048,017). Applicants respectfully submit that Doshi does not cure the deficiencies in the combination of Tan with Bustos '288. Doshi discloses a resin structure having a "friction enhancing materials secured to the upper surface of the bottom panel". The friction enhancing material is an open mesh fabric or webbing which is bonded to a bed liner for a pickup truck. The mesh fabric is preferably the same material as the liner which as shown is preferably high density polyethylene.

As one skilled in the art would understand, high density polyethylene is not a soft flexible material which conforms to a surface on which it is applied and provides a non-slip interaction with the surface. As disclosed in Doshi, the bed liner is made from a material which has a low coefficient of friction. It is the object of the invention to increase the coefficient of friction so that articles loaded into the bed of the pickup truck do not have the tendency to slide and move around when the truck is moving. Applicants respectfully submit that the structure of Doshi has a bottom surface with a low coefficient of friction and a top surface with a high coefficient of friction which is just

opposite to the structure of the mat of the present invention. The structure of Doshi is similar to the structure of Tan and Bustos '288 in that the bottom surface is a hard plastic material. However, a top surface of Doshi like the top surface of Tan is a high friction surface which is the opposite effect provided by the structure of the present invention. Applicants respectfully submit that the teachings of Doshi does not cure the deficiencies in combination of Tan with Bustos '288. Applicants therefore respectfully submit that the rejection is untenable and respectfully request that the rejection be reconsidered and withdrawn.

Claims 5 and 6 stand rejected under 35 U.S.C. 103(a) as unpatentable over Tan in view of Bustos '288 and further in view of Shoemaker et al. (US 4,137,356). Applicants respectfully submit that Tan, Bustos '288, and Shoemaker et al. whether considered alone or in combination neither teach nor suggest the present invention.

The Examiner points to Fig. 4 of Shoemker et al. to indicate that the bottom extending projections are located directly underneath the top upper extending projections. Applicants respectfully submit that Fig. 4 does not show such a structure. As disclosed in the specification, the top projections are about 3/4 inch long and about 1/16 inch wide. (See col. 2, lines 27-29). The downward extending projections are 3/8 inch long by 1/16 inch wide. It would be clear that the upper extending projections cannot be directly above the downward extending projections simply by reason of their size. In addition, there is neither teaching nor suggestion that the top and bottom projections are printed in a registered pattern which would make superpositioning of the top and bottom projections possible.

In addition, Shoemaker et al. disclose that the top and bottom projections are of a high coefficient of friction material. Applicants submit that the present invention utilizes a high coefficient of friction material for the bottom surface and a low or lower coefficient of friction material for the upper surface. Applicants respectfully submit that Shoemaker et al. does not cure the deficiencies in the teachings of Tan and Bustos '288. Applicants submit that Shoemaker et al discloses a substrate such as paper having imprinted on the top and bottom surfaces a pattern of a high friction material.

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The high friction material on the top and bottom surfaces prevents slipping of the placemat on the surface on which it is supported and prevents slipping of an article placed on the top surface. Applicants submit that the structure of the present invention provides a non-slip lower surface, but provides a upper surface of ridges with a coefficient of friction lower than the bottom surface so that articles can readily be moved along the ridges on the top surface. Applicants respectfully submit that Shoemaker et al. does not cure the deficiencies in the teaching of Tan and Bustos '288. Applicants respectfully submit that the rejection is untenable and respectfully request that the rejection be reconsidered and withdrawn.

Claim 7 stands rejection under 35 U.S.C. 103(a) as unpatentable over Tan in view of Bustos '288 and further in view of Reid (US 4,636,423). Applicants respectfully submit that Tan, Bustos '288, and Reid whether considered alone or in combination neither teach nor suggest the present invention. The Examiner states:

> "Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tan in view of Bustos ('288) as applied to claims 1, 2, 4, and 8-12 above, and further in view of Reid. Reid teaches the upwardly extending ridges (24) are straight and parallel. See Figure 3."

Applicants respectfully request that the Examiner reconsider Fig. 3. Fig. 3 of Reid is a cross-section of the structure shown at Fig. 2 along the lines 3-3. As stated at col. 2, lines 24-28, Fig. 2 is a perspective view of the abrasion resistant fabric with the abrasion resistant coating applied in a dot pattern:

> Fig. 3 is a sectional view taken substantially along the line 3-3 in Fig. 2:

Applicants respectfully submit that instead of being upwardly extended ridges in a straight and parallel pattern, the pattern shown in Fig. 3 is a cross section of a dot pattern as shown in Fig. 2. Applicants respectfully submit that the rejection is untenable and respectfully request that the rejection be reconsidered and withdrawn.

In summary, the prior art cited by the Examiner would neither teach nor suggest the present invention. In addition, the references are in part not combinable.

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Tan and Bustos '288 disclose structures having a hard base surface. This can be seen from Tan in that the projections formed from the base surface material are sufficiently strong and stiff to penetrate ice when a pressure is applied.

The base plate of Bustos '288 is formed from a rigid material such as high impact polystyrene having beads of a softer material with a lower coefficient of friction extending from the top surface. Applicants submit that the softer plasticized material extending from the top surface to provide a low friction top surface would neither teach nor suggest the present invention.

In addition, Bustos '288 does not appear to be combinable with Tan since the object of the Tan material is to provide a high coefficient of friction upper surface to prevent slipping while the Bustos '288 top surface utilizes a soft plastic material plasticized with a silicone which provides a low coefficient of friction top surface. This is a result opposite to that required by Tan. If the Bustos '288 surface was applied to the Tan mat, the Tan mat would have a surface which had a tendency for easy slipping.

Applicants respectfully submit that to be combinable, there must be some suggestion in the references to make the combination. Applicants submit that there is no suggestion to make the combination since applying the teachings of Bustos '288 to Tan would provide an article with an easy slip surface which would be dangerous for one attempting to walk on the surface in inclement weather. Applicants respectfully submit that the present invention is not obvious over the teachings of Tan when considered with Bustos '288.

The Doshi reference like Tan provides a top surface with a high coefficient of

friction. This top surface is made from a material which is substantially the same as the material forming the bottom surface. Applicants therefore respectfully submit that there is neither teaching nor suggestion to provide a hard upper surface with a coefficient friction lower than a coefficient of friction of a soft bottom surface. Tan, Bustos '288 and Doshi require that the bottom surface be a hard stiff material rather than the soft flexible material useful in the present invention. Applicants respectfully submit that the combination of Tan, Bustos '288 and Doshi neither teach nor suggest the present invention.

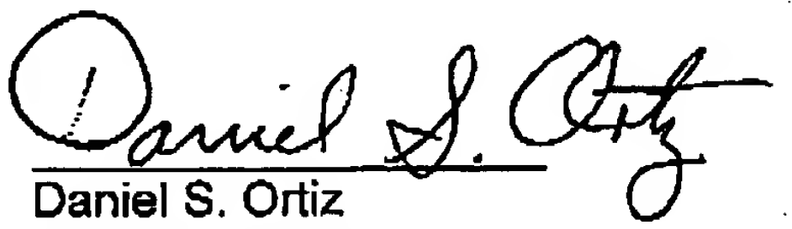
The teachings of Shoemaker et al. do not cure the deficiencies in the combination of references since Shoemaker, et al. is directed to a mat which has a top and bottom surface having a high coefficient of friction. In addition, the Examiner states that the top projections and the bottom projections are superimposed on each other. Applicants submit that there is no teaching in the reference that the top and bottom projections are superimposed on each other. They could not be completely superimposed on each other since the sizes of the two ridges are substantially different. In addition, the materials are printed and there is neither teaching nor suggestion that the printing be done to cause superpositioning of the top and bottom projections. Applicants respectfully submit that Shoemaker et al. does not cure the deficiency in the combination of references.

The rejection based on the combination of Tan with Bustos '288 and Reid is not proper. The Examiner states that Reid shows in Fig. 3 that the ridges are parallel to each other. Applicants respectfully request that the Examiner reconsider this reference

since Reid in Fig. 3 discloses a cross section of the article in which the pattern of abrasion resistant material is in the form of dots (see Fig. 2). Applicants respectfully submit that Reid does not cure the deficiency in the combination of references.

In view of the above discussion, Applicants respectfully submit that the application is in condition for allowance and favorable consideration is requested.

Respectfully submitted,



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